LINKSYS PAP2
CONFIGURATION GUIDE

Minimum Requirements

- Active Freshtel Internet Phone account
  - http://www.freshtel.net
- Broadband Internet Connection
  - 256/64 kbps minimum
- Broadband Modem/Router
  - Must have an Ethernet port to connect to the PAP2.
- Analogue Telephone with RJ-11 line (Desktop or Cordless)

Before You Begin

We recommend you ensure that the latest firmware update for this device has been downloaded and installed. For further information, visit the manufacturer's website at http://www.linksys.com

If you are using the Freshtel Internet Softphone on your PC with the same Freshtel number that you wish to use in your Linksys, we advise you to uninstall or disable the Freshtel softphone. Your Freshtel account can only be active at one point on our network at any one time, and having two identical active accounts will cause conflicts.

If you do not yet have a Freshtel account, you should go to our website at http://www.freshtel.net and register a new account before starting to configure the Linksys.

Initial Setup

Before configuration please refer to the Linksys PAP2 user guide for further information on how to connect the device to your network.

Use this illustration of the back of the ATA to connect it to your network.

1. Phone 1 – plug in your analog telephone cord:

2. Ethernet Port - use an Ethernet cable to connect your PAP2 to your router or modem:

3. Power connection - Connect the power to your PAP2:

If you require more advice, please refer to the help documents on our website at http://www.freshtel.net/help or contact Customer Care at info@freshtel.net

PAP2 Configuration

To obtain the IP address of the PAP2, proceed with the following steps:

1. Dial ****
2. Dial 110#

An automated voice will then announce the IP address. Make sure to keep a record of the IP address for future use.

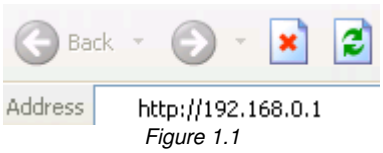


Figure 1.1

Enter the PAP2's IP address in your browser's address bar to access the PAP2's configuration menu.

If you are experiencing difficulty trying to connect to the device at this point, please refer to the PAP2 user guide or contact Linksys Technical Support for further assistance.

VoIP Configuration

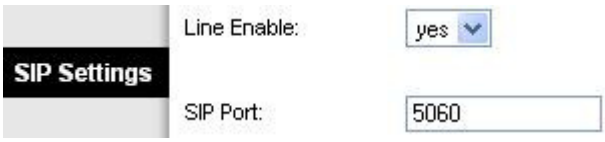
Once you have logged into the PAP2 Configuration Center, log in as the Administrator by clicking the **ADMIN LOGIN** on the top right hand side of the page.

For more information regarding each property and option, please refer to the PAP2 user manual.

Click on the **ADVANCED** button (top right hand side) to access the Advanced settings.

1. Click on the **LINE 1** tab

SIP Settings

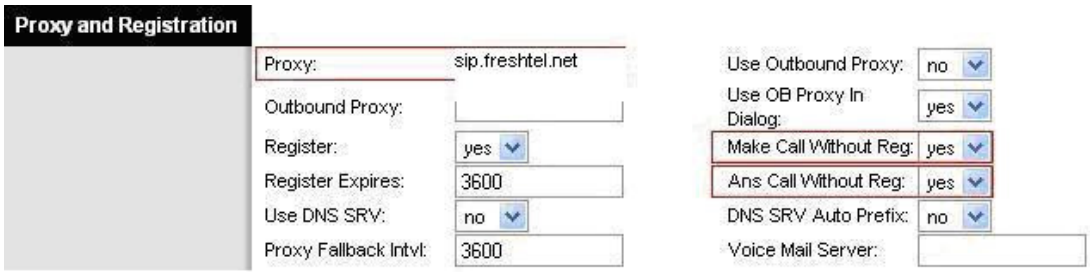


a. **LINE ENABLE**: *Yes*
b. **SIP PORT**: *5060*

NAT Settings

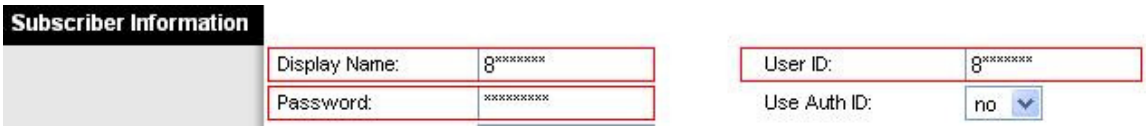
a. **NAT MAPPING ENABLE**: *Yes*
b. **NAT KEEP ALIVE**: *Yes*

Proxy and Registration



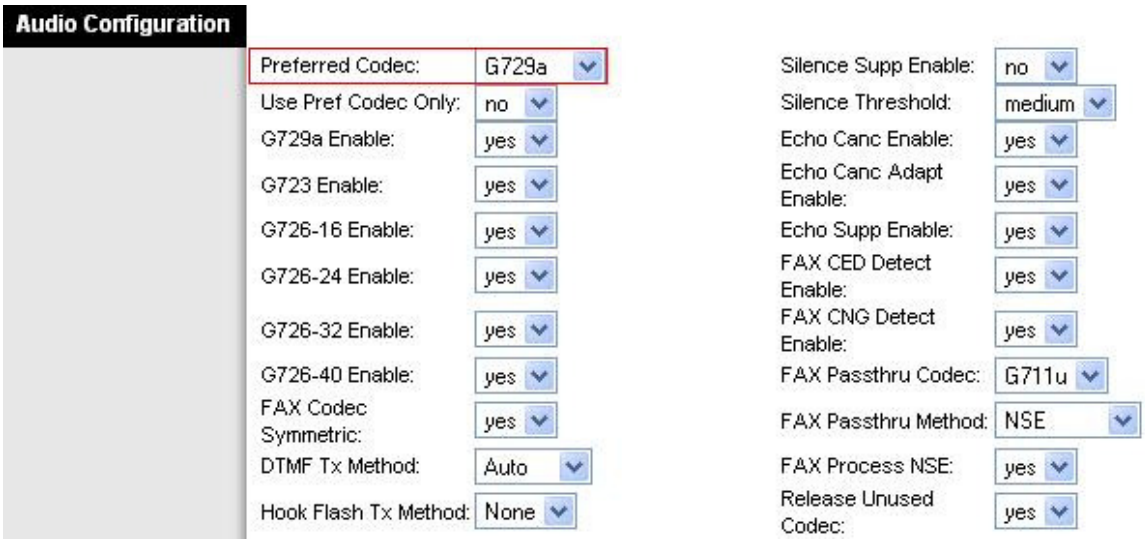
a. **PROXY**: *sip.freshtel.net*
b. **MAKE CALL WITHOUT REG**: *Yes*
c. **ANS CALL WITHOUT REG**: *Yes*

Subscriber Information



a. **DISPLAY NAME**: *Enter your Freshtel Number*
b. **USER ID**: *Enter your Freshtel Number*
c. **PASSWORD**: *Enter your Freshtel Password*

Audio Configuration



a. PREFERRED CODEC : G.729a

Dial Plan

1. DIAL PLAN :

   Dial Plan (Australia only -- user has no local call prefix set)

   (*123|*xxxxxxxx|<000:61000>S0|<112:61112>S0|<106:61106>S0|61000S0|61112S0|61106S0|0[237
   8][2- 9xxxxxxx|0[4569]xxxxxxxx|611300xxxxxx|611800xxxxxx|6113xxxx|6118xxxx|[1-9]x.)

   Dial Plan (Australia only -- user has local call prefix set)

   (*123|*xxxxxxxx|000S0<:@gw0>|112S0<:@gw0>|106S0<:@gw0>|001[0-
   9]x.|0[4569]xxxxxxxx|0[2378][2-9]xxxxxxx|[2-
   9]xxxxxxx|1300xxxxxx|1800xxxxxx|13xxxx|18xxxx|1[4-79]x.)

   * If you plan on copying the dial plans, please copy to a text document, remove the spaces and newlines, then copy into the dial plan entry on your device.

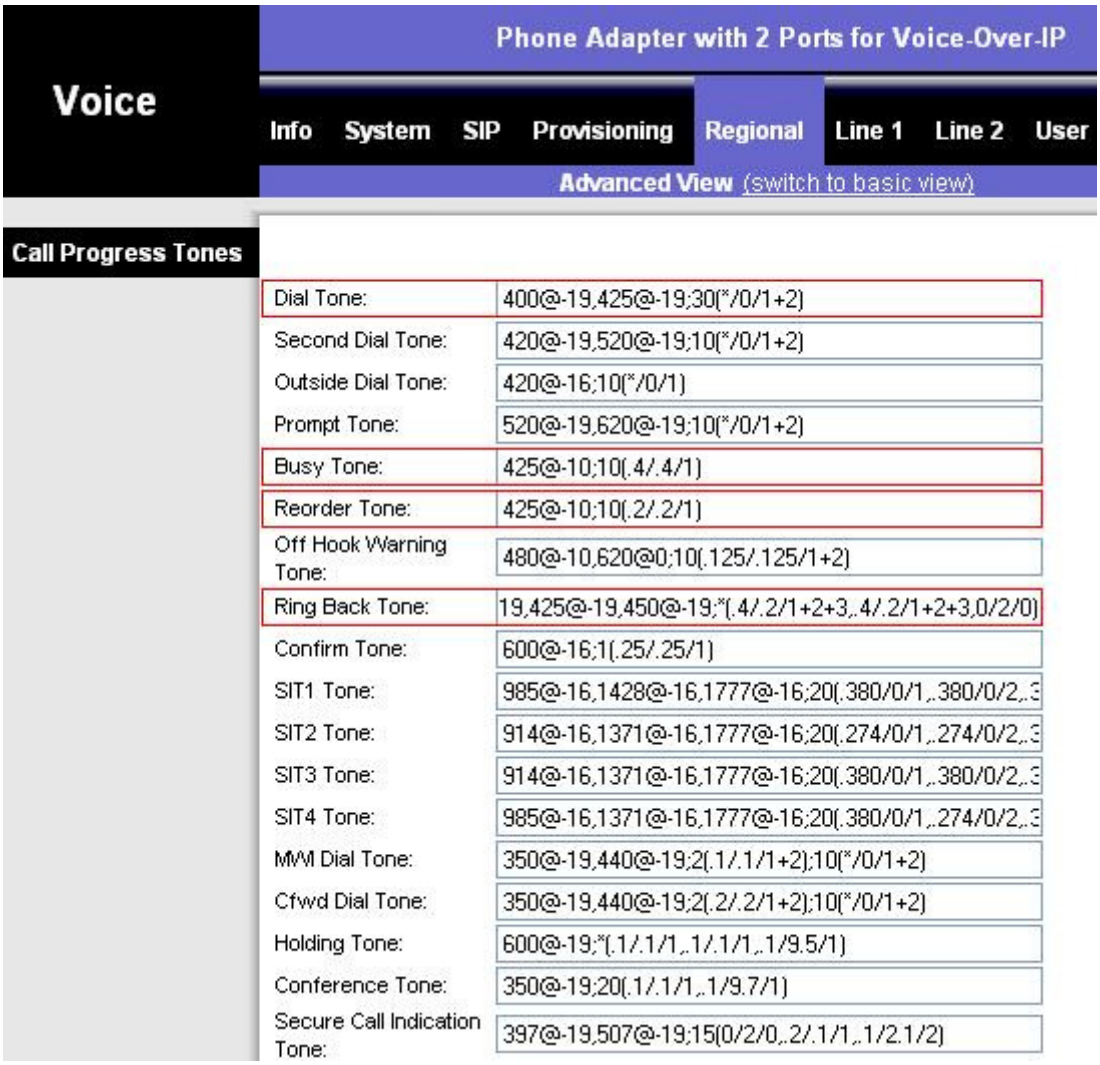
2. Click on SAVE SETTINGS

3. Click on the SIP tab

NAT Support Parameters

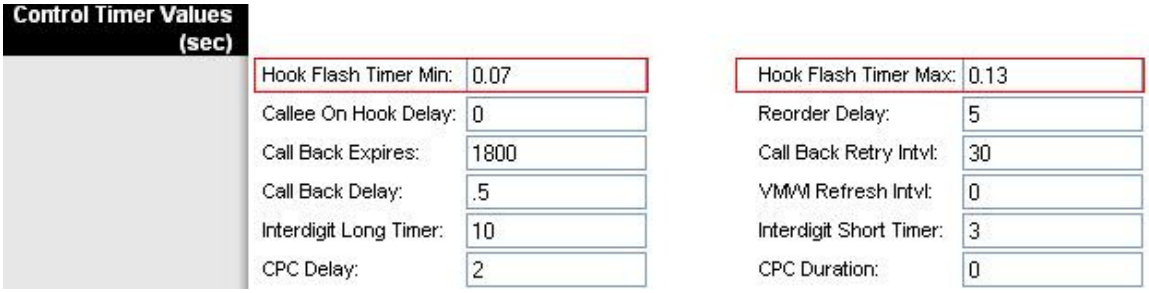
1.
   a. **STUN ENABLE**: *No*
2. Click on **SAVE SETTINGS**
3. Click on the **REGIONAL** tab

Call Progress Tones



a. **DIAL TONE**:
   - *400@-19,425@-19;30(*/0/1+2)*
b. **BUSY TONE**:
   - *425@-10;10(.4/.4/1)*
c. **REORDER TONE**:
   - *425@-10;10(.2/.2/1)*
d. **RING BACK TONE**:
   - *400@-19,425@-19,450@-19;*(.4/.2/1+2+3,.4/.2/1+2+3,0/2/0)*

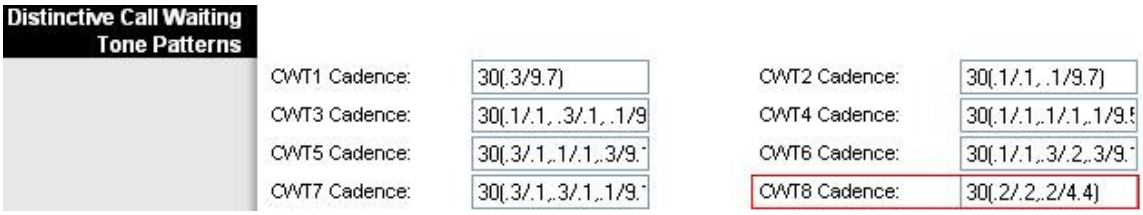
Control Timer Values



Control Timer Values (sec)				
	Hook Flash Timer Min:	0.07	Hook Flash Timer Max:	0.13
	Callee On Hook Delay:	0	Reorder Delay:	5
	Call Back Expires:	1800	Call Back Retry Intvl:	30
	Call Back Delay:	.5	VMWI Refresh Intvl:	0
	Interdigit Long Timer:	10	Interdigit Short Timer:	3
	CPC Delay:	2	CPC Duration:	0

e. **HOOK FLASH TIMER MIN**: *0.07*
f. **HOOK FLASH TIMER MAX**: *0.13*

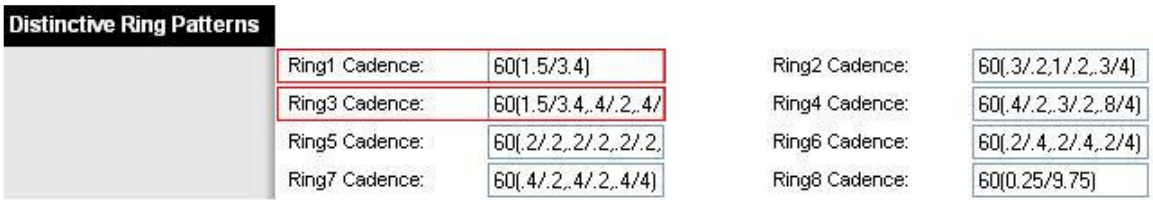
Distinctive Call Waiting Tone Patterns



Distinctive Call Waiting Tone Patterns				
	CWT1 Cadence:	30(.3/9.7)	CWT2 Cadence:	30(.1/.1,.1/9.7)
	CWT3 Cadence:	30(.1/.1,.3/.1,.1/9	CWT4 Cadence:	30(.1/.1,.1/.1,.1/9.5
	CWT5 Cadence:	30(.3/.1,.1/.1,.3/9.	CWT6 Cadence:	30(.1/.1,.3/.2,.3/9.
	CWT7 Cadence:	30(.3/.1,.3/.1,.1/9.	CWT8 Cadence:	30(.2/.2,.2/4.4)

g. **CWT8 CADENCE**: *30(.2/.2,.2/4.4)*

Distinctive Ring Patterns

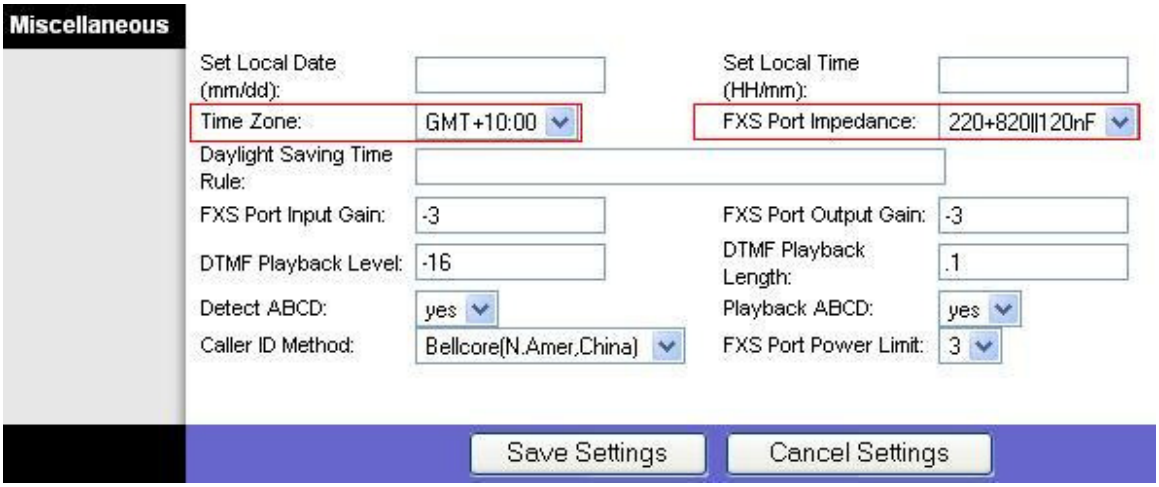


Distinctive Ring Patterns				
	Ring1 Cadence:	60(1.5/3.4)	Ring2 Cadence:	60(.3/.2,1/.2,.3/4)
	Ring3 Cadence:	60(1.5/3.4,.4/.2,.4/	Ring4 Cadence:	60(.4/.2,.3/.2,.8/4)
	Ring5 Cadence:	60(.2/.2,.2/.2,.2/.2,	Ring6 Cadence:	60(.2/.4,.2/.4,.2/4)
	Ring7 Cadence:	60(.4/.2,.4/.2,.4/4)	Ring8 Cadence:	60(0.25/9.75)

h. **RING 1 CADENCE**:
   - *60(1.5/3.4)*

i. **RING 3 CADENCE**:
   - *60(1.5/3.4,.4/.2,.4/2,.4/.2,.4/2,.4/.2,.4/2,.4/.2,.4/2,.4/.2,.4/2,.4/.2,.4/2,.4/.2,.4/2,.4/.2,.4/2,.4/.2,.4/2,.4/.2,.4/2,.4/.2,.4/2,.4/.2,.4/2)*

Miscellaneous



j. **TIME ZONE**: *GMT+10:00 (or relevant to your area)*

k. **FXS PORT IMPEDANCE**:

- 600 <North America>
- 270+750||150nF <most of Europe>
- 220+820||120nF <Australia, New Zealand>
- 220+820||115nF <Austria, Bulgaria, Germany, Slovakia, South Africa>
- 370+620||310nF <UK, India>

Extra Information

To reset the device to its factory defaults, perform the following with your handset:

1. Dial " ******** "
2. Dial " **73738#** "
3. Dial " **1**" (to confirm)

Making Your Call

Please refer to the following examples for making calls via your handset using the Linksys PAP2.

Examples

FIP Number:

1. *8000 1234

Landline Number:

1. 61 3 9123 4567, or
2. 03 9123 4567, or
3. 9123 4567
    a. (with local prefix set to relevant state)

Mobile Number:

1. 61 412 345 678
    a. (Drop the First Zero)
2. 0412 345 678
    a. (works with and without local prefix set)

National Numbers:

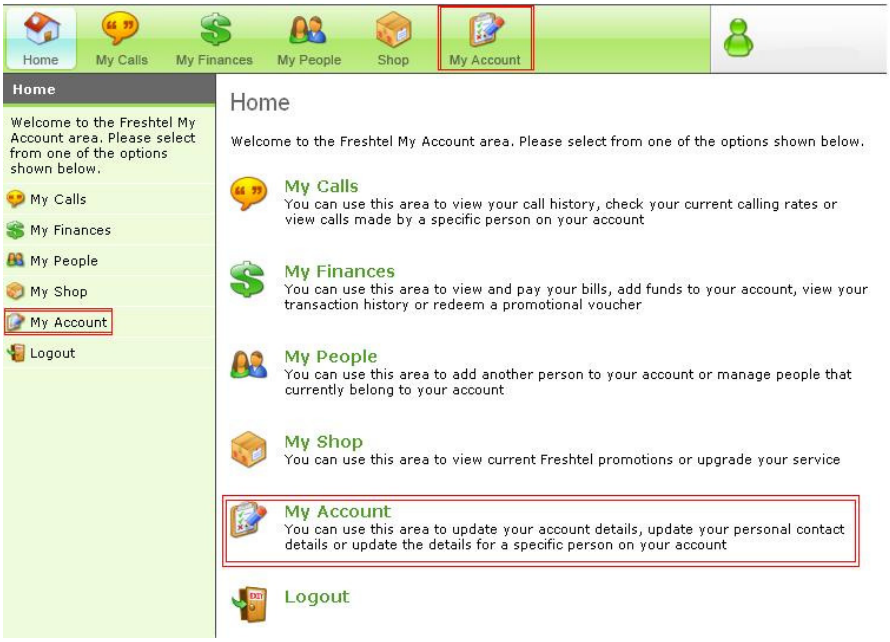
1. 1300 number:
    a. 61 1300 123 456, or
    b. 1300 123 456
        i. (with local prefix set to relevant state)
2. 1800 number:
    a. 61 1800 123 456, or
    b. 1800 123 456
3. 13 number:
    a. 61 13 12 34, or
    b. 13 12 34

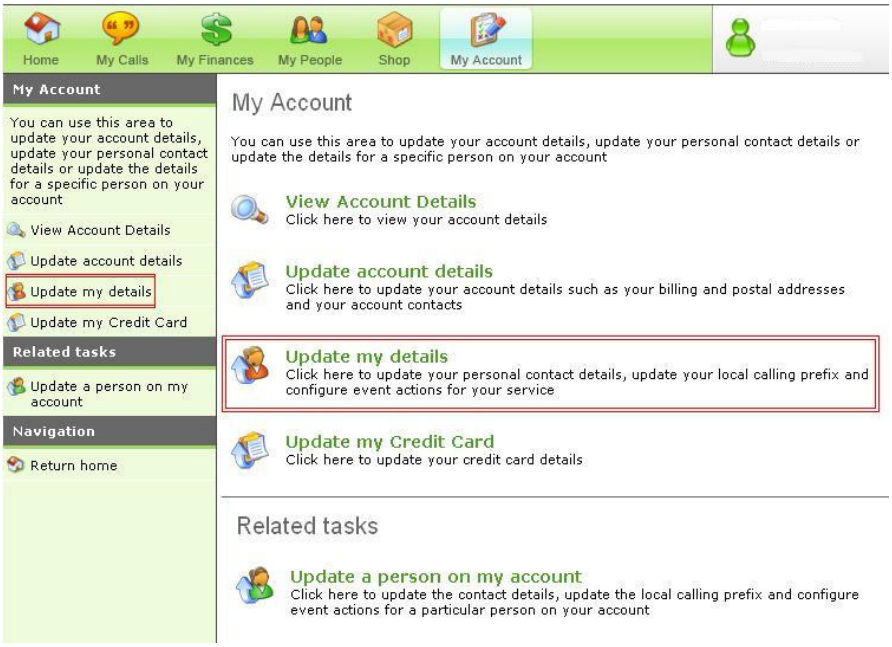
International Numbers:

1. (Country Code) (Area Code) (Number)
    a. Example: 44 708 12345678

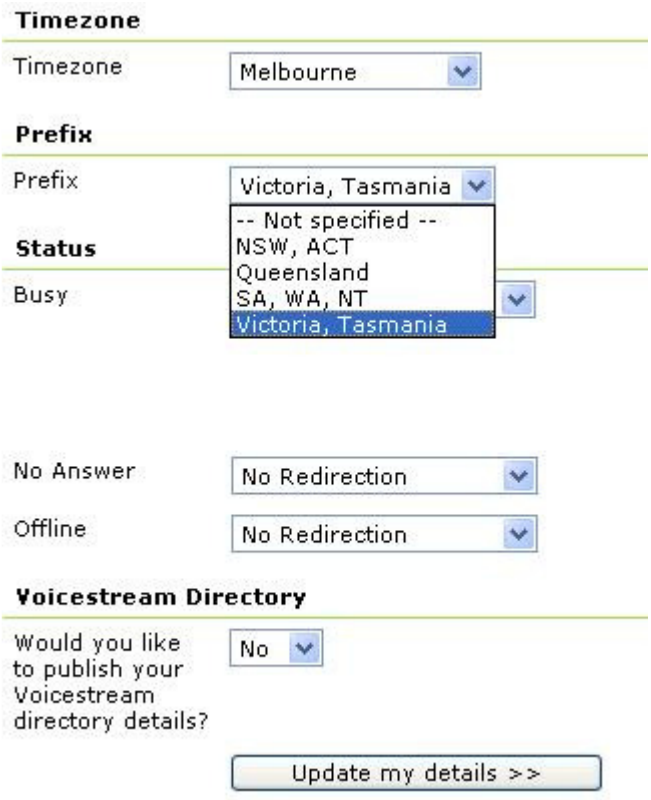
Setting Local Call Prefix on Your Account

1. Log into your account at http://www.freshtel.net
2. Click on **MY ACCOUNT**


Home
My Calls
My Finances
My People
Shop
My Account
Home
Welcome to the Freshtel My Account area. Please select from one of the options shown below.
My Calls
My Finances
My People
My Shop
My Account
Logout
Home
Welcome to the Freshtel My Account area. Please select from one of the options shown below.
My Calls
You can use this area to view your call history, check your current calling rates or view calls made by a specific person on your account
My Finances
You can use this area to view and pay your bills, add funds to your account, view your transaction history or redeem a promotional voucher
My People
You can use this area to add another person to your account or manage people that currently belong to your account
My Shop
You can use this area to view current Freshtel promotions or upgrade your service
My Account
You can use this area to update your account details, update your personal contact details or update the details for a specific person on your account
Logout


Home
My Calls
My Finances
My People
Shop
My Account
My Account
You can use this area to update your account details, update your personal contact details or update the details for a specific person on your account
View Account Details
Update account details
Update my details
Update my Credit Card
Related tasks
Update a person on my account
Navigation
Return home
My Account
You can use this area to update your account details, update your personal contact details or update the details for a specific person on your account
View Account Details
Click here to view your account details
Update account details
Click here to update your account details such as your billing and postal addresses and your account contacts
Update my details
Click here to update your personal contact details, update your local calling prefix and configure event actions for your service
Update my Credit Card
Click here to update your credit card details
Related tasks
Update a person on my account
Click here to update the contact details, update the local calling prefix and configure event actions for a particular person on your account

3. Click on **UPDATE MY DETAILS**



3. Scroll down to the **PREFIX** section, and select from one of the following options
    a. "Not Specified" *No Prefix to be set*
    b. "NSW, ACT" *02*
    c. "Queensland" *07*
    d. "SA, WA, NT" *08*
    e. "Victoria, Tasmania" *03*

4. Click on **UPDATE MY DETAILS**

Defintions

- **BIT - Binary Digit** - Bits are widely used as a measurement for network transmission. One hundred megabits per second means that 100 million pulses are transmitted per second.
- **Broadband** – Internet Connection that has a connection speed greater than 256kbps downstream and 64kbps upstream.
- **Broadband Router** - A device that provides access to the Internet for multiple computers, typically including a network switch with four or more Ethernet ports for wired connections to desktop and laptop computers.
- **BYTE – Binary Table** - Another form of measurement to determine size and speed. 1 byte is equivalent to 8 Bits, so for an internet connection of 256/64kbps (kilobits per second, kilo meaning 100 units), it is roughly equivalent to 25 Kilobytes per second (download rate) and 6 kilobytes per second (upload rate).
- **Ethernet –** A type of cable which is used to interconnect network devices to allow communication between them over the medium.
- **FIP** – Freshtel Internet Telephone
- **Freshtel** – VoIP Internet Telephone Company
- **KBPS** – Kilobits Per Second is the measurement used to determine the bandwidth speed of an internet connection.
- **Mbps – Megabits Per Second** – A unit of measurement used to show the capacity and/or rate of speed for a particular medium in megabits.
- **MBps – Megabytes Per Second** - A unit of measurement used to show the capacity and/or rate of speed for a particular medium in megabytes.
- **NAT**- Network Address Translation maintains and controls the separation of a public IP address to one or more private IP addresses. Commonly used for internet connection sharing via a router.
- **USB – Universal Serial Bus** – A “Plug-and-Play” medium used to interconnect different types of USB compatible devices to each other either via USB 1.1 (at 12Mbps maximum transfer rate), or Hi-Speed USB 2.0 (at 480Mbps maximum transfer rate).
- **Wireless Broadband** – Same as broadband, however is a medium transmitted through radio waves set at a certain radio frequency.
- **Windows XP** – Microsoft’s current Operating System platform for PC based systems.

E-Mail: info@freshtel.net